Stage 1 – Environmental Scan and Initial Planning

1 Identify problem (IPC and Pharmacy data)

2 Understand the hospital:
   Patient type
   Hospital size
   Areas of speciality
   Number of ICUs

3 Know the Doctors:
   Key Opinion Leaders?
   Doctor specialities?
   Which units do the Doctors admit to?
   Who is willing to participate in a programme?

4 Identify major role players
   Communicate and obtain support where possible from:
   All Doctors
   Microbiologist/s
   Pharmacist/s
   IPC Practitioner
   Nursing staff

5 Resources
   Ensure there are suitable resources available (e.g., Pharmacists)
   Train the resources

Talk to Doctors

Current/retrospective review: antibiotic utilisation and organism resistance/prevalence profiles
Stage 2 - Creating Awareness and Preparing the Ground

1. Identify problem and obtain permission to propose solutions via Antibiotic Stewardship

2. Have a formalised communication session/presentation/launch programme/CPD event to as many Doctors as possible:
   - Specialist meeting
   - Medical/Physician Advisory Committees
   - Infection Control meetings
   - Special event

3. Memo to Doctors and Nursing staff:
   - Overview
   - Intervention types, which unit, how often

4. Provide education on appropriate antibiotic use
   - Microbiologist/s to assist
   - All Doctors
   - Pharmacist/s
   - IPC Practitioner
   - Nursing staff
   - Hospital Management
Antibiotic Stewardship Process Maps

Stage 3 - Establishing a Team

1 Identify the team members
   Key Doctors
   Microbiologist/s
   Pharmacist/s
   IPC Practitioner
   Unit Managers

2 Establish the committee:
   Initial meeting
   Establish primary interventions
   Agree to certain intervention tools
   Discuss progress reports

3 Review IPC data:
   Alert organism profile
   Organism resistance/surveillance profile

4 Initial ward
   Decide on the appropriate area to initiate the programme

Suggested intervention tools:
1. Daily antibiotic report per patient
2. Daily checklist – ward round
3. Reconciliation reports – Antibiotic/s to pathogen/s
4. Hazardous Biologic Agent report – in units & trend analysis
5. Treatment guidelines available in the hospital
6. Record pharmacist interventions
7. Means to communicate to Doctors:
   a. One-on-one discussion
   b. Phone call
   c. Text/sms message
   d. Note on chart
   e. Other note format
Antibiotic Stewardship Process Maps

March, 2011

Stage 4 - Establishing Extent of the Problem; Stage 5 - Set goals & Prioritise Interventions

1 – Pathology
- Appropriate specimens are taken?
- Prompt lab results?
- Microbiology results for all patients on antibiotics?
- Treatment tailored to pathogen?

2 – Local sensitivity data available for pathogens:
- IPC – organism report
- Lab data (Ampath, Lancet, NHLS etc)

3 – Microbiologist available to consult:
If not – contact labs to find someone to work with. Contact number available in all relevant areas.

4 – Empiric/treatment guidelines available in all areas:
- Ampath general guidelines
- Committee to tailor guidelines based on local organism prevalence and resistance patterns

Determine the problem
(7 points to consider)
- Agree process to follow with the committee
- If not followed, further direct discussion (peer to peer, microbiologist, pharmacist, committee)

5 – Surgical prophylaxis guidelines:
- Available in theatre?
- Correct antibiotics per procedure?
- No high level agents used?
- Prophylaxis given 1 hr before incision?
- Antibiotics stopped when patient out of theatre or within 24 hours (as appropriate)?

6 – Pharmacist resource:
- Identify interested pharmacist/s
- Employ pharmacists with clinical interest
Stage 6 - Measurement

1 – Organism report
   Monthly

2 – Antibiotic/ Pathology cumulative report from the Labs
   Weekly

3 – Antibiotic report per patient
   Daily

4 – Pharmacist checklist/
     Patient summary chart
   Daily

5 – Pharmacist notes
   Daily

6 – Pharmacist suggested intervention report
   Monthly

7 – Interventions suggested vs accepted comparison
   Monthly

8 – Antibiotic utilisation report
   - Duration of therapy
   - More than 3 agents at a time
   - Duplicate cover
   Monthly

9 – Antibiotics used for surgical prophylaxis
   Weekly

Measurement tools (9 to consider)
Stage 7 - Review of Effectiveness; Stage 8 - Spread

1 – Daily, weekly, monthly reports
Relevant individuals to prepare and monitor their reports for trends

2 – Discuss at the committee meeting

3 – Communicate as agreed by the committee

Positive outcomes, such as:
8. Positive change in pathogen resistance patterns
9. Decreased ICU stays
10. Decreased ventilator days
11. Increased acceptance of interventions
12. Positive change to antibiotic prescribing habits
13. Decreased costs (overall)

No progress changes or challenges faced:
1. Consider the obstacles, obtain feedback and find solutions
2. Committee to agree to intervention changes
3. Consult with key opinion leaders
4. Have education sessions if necessary
5. Communicate intervention alterations to all stakeholders

Publish data and communicate successes to all stakeholders

Monitor progress and review outcomes at next committee meeting

Spread the intervention/s to more units within the hospital